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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,919	03/05/2002	David M. Choy	SVL920010092US1	7085

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EXAMINER
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LU, KUEN S

ART UNIT	PAPER NUMBER
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2167

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/091,919

Applicant(s)

CHOY ET AL.

Examiner

Kuen S Lu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendments***

1. The Action is responsive to the Applicant's Amendments, filed on November 4, 2004.
2. The Applicant's amendments made to claims 1-43 are considered and addressed in the Office Action for Final Rejection, as described below.
3. As for the Applicant's Remarks on claim rejections, filed on November 4, 2004, has been fully considered by the Examiner, please see discussion in the section Response to Arguments, following the Office Action for Final Rejection. Please note in this Office Action for Final Rejection, the Examiner maintains the same grounds as what was set forth in the Office Action for Non-Final Rejection, dated July 29, 2004.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-6, 14-25 and 33-37 are rejected under U.S.C. 103(a) as being unpatentable over Jensen et al. (U.S. Patent 6,078,926, hereafter "Jensen") in view of Alexander (U.S. Patent 6,732,331).

As per claims 1, 14, 20 and 33, Jensen teaches the following:

“associating a root component of the” content management “object with a row in a first relational database table” (See col. 7, lines 8-12 wherein Jensen’s **object to relational mapping identifies the relational database row as corresponding to a new object** is equivalent to Applicant’s associating a root component of an object to a row of relational database table);

“associating attributes of the root component with corresponding columns of the first relational database table” (See col. 6, lines 3-4 wherein Jensen’s **relational table columns mapping into attributes** is equivalent to Applicant’s associating object attributes to relational database table;

“associating additional components of the” content management “object, if any, to rows in additional relational database tables” (See Fig. 3, elements 104 and 107 wherein Jensen’s **a plurality of table rows R1-R4 are mapped to objects B1-B4, respectively** is equivalent to Applicant’s associating additional table rows to additional objects).

Jensen does not specifically teach “content management objects” or “using the item defined by the relational database tables to construct a plurality of high level content management data models”.

However, Alexander teaches content management objects (See Fig. 5, wherein Alexander’s **objects in the context management framework model** is equivalent to Applicant’s content management objects) and further teaches “content management objects” or “using the item defined by the relational database tables to construct a plurality of high level content management data models” (See Fig. 4, steps C-E, Fig. 5

and col. 8, lines 5-40 wherein Alexander's **software knitting the relationships between the objects in a collection, and the collection of objects and mapping between tables and objects determines the cardinality of the EMP-DEPT relationship** is equivalent to Applicant's high level content management data models).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Alexander's reference with Jensen's teaching by including content objects in the object to database table row mapping because both references deal with object classes and models and the combined reference would have enabled Jensen's system to further include multi-media content objects in the object to relational database table row mapping for building the content management framework.

As per claims 2, 15, 21 and 34, Jensen teaches "each of the additional components comprises a child component of a root component or a child component of another component" (See Fig. 3, element 104 and col. 6, lines 60-62 wherein Jensen's **class B objects are child components of class A wherein the child-parent relationship is built on foreign-primary key** is equivalent to Applicant's child-parent component relationship).

As per claims 3, 16, 22 and 35, Jensen teaches "using a foreign key in a child component to reference its parent component" (See Fig. 3, element 104 and col. 6, lines 60-62 wherein Jensen's **class B objects are child components of class A wherein the**

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**child-parent relationship is built on foreign-primary key** teaches Applicant's foreign keys).

As per claims 4, 17, 23 and 36, Jensen teaches "an attribute comprises a pointer to a data source stored in a separate repository" (See Fig. 3, element 104 and col. 6, lines 60-62 wherein Jensen's **class A components and class B components are stored in different tables wherein the foreign keys of class B tables point to the primary keys of class A tables** is equivalent to Applicant's separate repository and pointers of data source).

As per claims 5, 18 and 24, Jensen teaches "an attribute comprises a pointer to another content management object" (See Fig. 3, element 104 and col. 6, lines 60-62 wherein Jensen's **class B table columns are object attributes pointing to parent class A table, another content management object, through foreign-primary key** wherein is equivalent to Applicant's attributes pointers and content management objects).

As per claims 6, 19 and 25, Jensen teaches "a row in an table comprises a link between a source item and a target item **class B tables point to class A tables through foreign-primary keys** is equivalent to Applicant's pointer pointing from one row of data to one row of another table).

As per claim 37, Jain teaches the following:

"present a query to a user as to a content item" (See Fig. 3 elements 201-208 and col. 11, lines 30-45 wherein Jain's **query window** is equivalent to Applicant's query presentation);

"based upon the end user's response, present a subsequent query as to the content item" (See Fig. 5B, elements 124 and col. 12, lines 52-58 wherein Jain's **comparison modules** is equivalent to Applicant's query presentation to the content item); and

"based upon the end user's further responses, determine the sub-components and attributes of the item" (See Fig. 5B, element 261 and col. 52-58 wherein Jain's **query processor for scoring, ranking and determining the content item to return to the user** is equivalent to Applicant's determining the item).

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 7-13 and 26-32 are rejected under 35 U.S.C. 102(b) as anticipated by Jain et al. (U.S. Patent 5,913,205, hereafter "Jain").

As per claims 7 and 26, Jain teaches the following:

"entering multimedia content data metadata and schema in the low level physical model" (See Fig. 1A, element 112 and col. 9, lines 28-30 wherein Jain's **insertion modules used to add one or more images to a database accessible by a database engine**

is equivalent to Applicant's entering multimedia content data metadata and schema in low level physical model); and

"mapping the metadata and schema to the data engine" (See Figs 5A-5B and col. 11, lines 57-67 wherein Jain's **feature vectors proves the mapping for metadata and schema of images in the image storage database** is equivalent to Applicant's mapping of metadata and schema to data engine).

As per claims 8 and 27, Jain teaches "the low level physical model supports a plurality of high level content models" (See Fig. 5B, element 132 and cols. 27-28 wherein Jain's **low level physical database model support high level content models in vertical applications, environmental imaging, medical and multimedia** is equivalent to Applicant's low level model supports a plurality of high level content models).

As per claims 9 and 28, Jain teaches "wherein the high level content model comprises an application program interface embodying a representation of one or more data structures and constraints" (See col. 29, lines 5-10 wherein Jain's **Visual Information Retrieval engine supports the development of applications, including models for user interfaces, database interfaces and image management which represent data structure and constraints** is equivalent Applicant's high level model comprising application interface).



As per claims 10 and 29, Jain teaches “the high level content model supports a plurality of content application requirements” (See col. 19, lines 1-7 wherein Jain’s **high level content model Visual Information Retrieval application requirements determines a plurality of primitives** is equivalent Applicant’s high level content model supports application requirements).

As per claims 11 and 30, Jain teaches “the low level physical model is extensible” (See Fig. 7 wherein Jain’s **low level application Visual Information Retrieval model is extensible** is equivalent to Applicant’s low level physical model is extensible).

As per claims 12 and 31, Jain teaches “adding additional high level content models” (See col. 27, lines 18-25 wherein Jain’s **Visual Information Retrieval engine allow easy development of applications, including vertical applications, environmental imaging, medical and multimedia** is equivalent to Applicant’s adding additional high level content models).

As per claims 13 and 32, Jain teaches “the data engine is chosen from the group consisting of relational database management systems, object oriented database management systems, object-relational database management systems and XML data repositories” (See col. 9, lines 38-40 and 28-30, col. 16, lines 10-12 and col. 4, lines 57-59 wherein Jain’s **database management, entering image into database, Object Management Group Standard and Visual Information Retrieval model supporting textual attributes** is equivalent to Applicant’s relational database management, object oriented

database management, object-relational database management systems and XML data repositories).

8. Claims 38-43 are rejected under 35 U.S.C. 102(b) as anticipated by Jensen et al. (U.S. Patent 6,078,926, hereafter "Jensen").

As per claim 38, Jensen teaches the following:

"present a query to a user as to a content item" (See Fig. 3 elements 201-208 and col. 11, lines 30-45 wherein Jain's **query window** is equivalent to Applicant's query presentation);

"based upon the end user's response, present a subsequent query as to the content item" (See Fig. 5B, elements 124 and col. 12, lines 52-58 wherein Jain's **comparison modules** is equivalent to Applicant's query presentation to the content item);

"based upon the end user's further responses, determine the components and attributes of the content item" (See Fig. 5B, element 261 and col. 52-58 wherein Jain's **query processor for scoring, ranking and determining the content item to return to the user** is equivalent to Applicant's determining the item);

"associating each component of the content item with a row in a separate relational database table" (See col. 7, lines 8-12 and col. 6, lines 3-4 wherein Jensen's **object to relational mapping identifies the relational database row as corresponding to a new object and relational table columns mapping into attributes** is equivalent to Applicant's

associating each component of the content item with a row in a separate relational database table); and

“associating attributes of the content item with corresponding columns of the relational database tables” (See col. 7, lines 8-12 and col. 6, lines 3-4 wherein Jensen’s **object to relational mapping identifies the relational database row as corresponding to a new object and relational table columns mapping into attributes** is equivalent to Applicant’s associating attributes of the content item with corresponding columns of the relational database tables).

As per claim 39, Jensen teaches “foreign key in a child component to reference its parent component” (See Fig. 3, element 104 and col. 6, lines 60-62 wherein Jensen’s **class B objects are child components of class A wherein the child-parent relationship is built on foreign-primary key** teaches Applicant’s foreign keys).

As per claim 40, Jensen teaches “a sub-component comprises a child component of a root component or a child component of another child component” (See Fig. 3, element 104 and col. 6, lines 60-62 wherein Jensen’s **class B objects are child components of class A wherein the child-parent relationship is built on foreign-primary key** is equivalent to Applicant’s child-parent component relationship).

As per claim 41, Jensen teaches “an attribute comprises a pointer to a data repository where the component is stored” (See Fig. 3, element 104 and col. 6, lines 60-62 wherein Jensen’s **class A components and class B components are stored in**

**different tables wherein the foreign keys of class B tables point to the primary keys of class A tables** is equivalent to Applicant's repository and pointers of data source).

As per claim 42, Jensen teaches "an attribute comprises a pointer to a data resource stored in a separate repository" (See Fig. 3, element 104 and col. 6, lines 60-62 wherein Jensen's **class A components and class B components are stored in different tables wherein the foreign keys of class B tables point to the primary keys of class A tables** is equivalent to Applicant's separate repository and pointers of data source).

As per claim 43, Jensen teaches "a row in an table comprises a link between a source item and a target item **class B tables point to class A tables through foreign-primary keys** is equivalent to Applicant's pointer pointing from one row of data to one row of another table).

### ***Response to Arguments***

9. The Applicants' arguments filed on November 4, 2004 have been fully considered but they are not persuasive, for the Examiner's response, please see discussion below:

a). At Page 14, concerning claims 1, 14, 20 and 33, the Applicant argued that the Examiner alleges that Jensen discloses the operation of "associating a root component of the content management object to a row in a first relational database table" by

describing an object-to-relational mapping that identifies a portion of a row of a results table as corresponding to a new object.

As to the above argument a), the Examiner respectfully disagrees. In the Office Action, the Examiner cited col. 7, lines 8-12 of Jensen reference by pointing out Jensen's ***object to relational mapping identifies the relational database row as corresponding to a new object*** is equivalent to Applicant's "associating a root component of the (content management) object with a row in a first relational database table". The Examiner believes the interpretation is reasonable and not excessive. Although the Applicant provides further assessment on the Jensen reference, however, what the Examiner did was citing a section of the reference believed providing a teaching equivalent to the Applicant's.

b). At Page 15, concerning claims 7 and 26, the Examiner thanks to the Applicant for noting a typo in the Office Action. The phrase "Sandoval further teaches" is now corrected to "Jain teaches".

c). At Page 15, concerning claims 7 and 26, the Applicant argued that the Examiner alleged that Jain discloses the operation of "entering multimedia content data metadata and schema in the low level physical representation" by describing that an insertion module 112 is used to add one or more images to a database 132 accessible by a database engine. The Applicant further argued that adding images to a database does not correspond to entering multimedia content data metadata and schema, let alone

entering the metadata and schema in a low level physical model that provides a mapping to the data engine.

As to the above argument c), the Examiner respectfully disagrees. Please note the query of image data involves specifying the property of data, including location of the property in the image data, which implies the metadata, structural, schema, property or features information of image data is stored along with the image data. (Please see Jain: col. 4, lines 20-30). When the Examiner cited **"insertion modules used to add one or more images to a database accessible by a database engine"**, the Examiner interpreted the structural data or metadata is also inserted, as it is further evidenced by Jain: col. 3, lines 17-23 wherein features of image data are stored as structural data.

d). At Page 16, concerning claim 38, the Applicant argued that Jensen fails to disclose or suggest that components of a content item are associated with rows in separate relational database tables.

As to the above argument d), the Examiner respectfully disagrees. Please note **object to relational mapping identifies the relational database row as corresponding to a new object and relational table columns mapping into attributes** provides a teaching of associating a content item with rows of database table(s), as further evidenced in Figs. 3-4.

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10. Regarding claims 2-6, 8-13, 15-19, 21-25, 27-32, 34-37 and 39-43, the claims are dependent on claims 1, 7, 14, 20, 26, 33 and 38, respectively. The Examiner applied the stated arguments as previously described in the Office Action for the Final Rejections.

11. In light of the foregoing arguments, the 35 U.S.C. 102 rejection of Claims 7-13, 26-32 and 38-43, and 35 U.S.C. 103 rejection of Claims 1-6, 14-25 and 33-37 is hereby sustained.

12. The prior art made of record

A. U.S. Patent No. 6,078,926

B. U.S. Patent No. 6,732,331

C. U.S. Patent No. 5,913,205

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

D. U.S. Publication 2001/0052032

E. U.S. Patent No. 5,907,846

F. U.S. Patent No. 6,405,205

**Conclusions**

13. THIS ACTION IS MADE FINAL.

The Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

**14.** The prior art made of record, listed on form PTO-892, and not relied upon, if any, is considered pertinent to applicant's disclosure.

If a reference indicated as being mailed on PTO-FORM 892 has not been enclosed in this action, please contact Lisa Craney whose telephone number is 571-272-3574 for faster service.

**15.** Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuen S Lu whose telephone number is 571-272-4114.

The examiner can normally be reached on 8 AM to 5 PM, Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on 571-272-4107. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.



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Kuen S. Lu

  
Patent Examiner

February 17, 2005



Luke Wassum

Primary Examiner

February 17, 2005